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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,405	08/30/2001	Prentice Lee Huffines	TK3615USNA	8575

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WILMINGTON, DE 19805

EXAMINER

TORRES VELAZQUEZ, NORCA LIZ

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 04/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/942,405

Applicant(s)

HUFFINES ET AL.

Examiner

Norca L. Torres-Velazquez

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 3 is rejected under 35 U.S.C. 112, first paragraph, as containing matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The phrase " wherein said second nonwoven layer is not a powder-bonded layer." is not literally supported by the specification. An amendment to the specification inserting this limitation will overcome this rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2, 4-6, 14-19, 28-31 and 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over CARROLL et al. (WO 97/45259) in view of DRELICH (US 2,880,113).

CARROLL et al. discloses sheet materials used in making medical drapes, medical gowns, and absorbent articles, such as diapers and sanitary napkins. (Page 1, lines 18-20). The reference discloses a moisture vapor permeable, substantially liquid impermeable composite sheet material comprising a fibrous substrate and a moisture vapor permeable thermoplastic film layer. The fibrous substrate is comprised of at least 50% by weight polyolefin polymer fibers.

Art Unit: 1771

The moisture vapor permeable thermoplastic film layer is melt bonded directly to the one side of the fibrous substrate. Preferably the film layer of the composite sheet has an average thickness of less than 50 microns and is comprised of at least 50% by weight of polymer selected from the group of block copolyether esters, block copolyether amides, polyurethanes, and combinations thereof. The reference further teaches that the sheet is also substantially free of micropores (monolithic). The reference further teaches that the film may be bonded between two fibrous substrates (Referring to the composite of claim 2 of the present invention). (Page 3, lines 23-38 through Page 4, lines 1-12)

The substrate may be woven or nonwoven structure with the nonwoven being preferred. (Page 6, lines 30-31) A particularly preferred nonwoven material for the fibrous substrates 14 and 16 is a fibrous polyolefin nonwoven web. Suitable polyolefin materials include polypropylene and polyethylene spunbonded webs, scrims, woven slit films, carded webs, flashspun webs, and woven or nonwoven sheets comprised of blends of polyolefin fibers or of polyolefin fibers and other fibers. The webs of polyolefin fibers can be made with a variety of desirable properties, including good vapor permeability, flexibility, softness and strength. (Page 7, lines 30-36) The reference further teaches that the composite sheet 10 is prepared by an extrusion coating process. (Page 9, lines 13-14) CARROLL et al. further teaches that if the polymers of the film layer 12 and the substrate 14 are chemically compatible, the polymer of the film layer will wet the polymer of the fibers to a greater extent, which, in turn, improves physical bonding between the layers of the composite sheet. Making the polymers of the moisture permeable film layer and the fibrous substrate more compatible also increases the level of chemical attraction between the layers of the composite sheet. The preferred polyether block copolymer moisture permeable films are compatible with ester-based fibrous substrates, such as

Art Unit: 1771

polyester webs, and thus adhere well to polyesters. (Page 17, lines 3-14) The reference further teaches the use of the composite sheet as a backsheet in a garment. (Page 24, lines 25-27)

The use of a nonwoven web of fibers, wherein greater than 95 weight percent of the fibers of the nonwoven web are compatible with the polymeric film would have been an obvious result-effective variable in view of CARROLL et al.'s teachings above.

With regards to claims 9 and 10, the reference teaches that the composite sheet material of their invention is capable of delivering an MVTR of at least about $1500 \text{ g/m}^2/24 \text{ hr.}$ (Page 12, lines 2-30).

With regards to the bond strength between the second nonwoven and the film, it is noted that the CARROLL et al. reference teaches the importance of physical bonding between the film and the substrate layers in the composite sheet and also the importance of the chemical compatibility of the materials (as disclosed above), therefore, a bond strength of at least 50 grams/inch would be an obvious result of the CARROLL et al. teachings.

However, CARROLL et al. fails to teach the use of a powder-bonded nonwoven layer.

DRELICH teaches fibrous nonwoven fabrics and teaches their use in applications such as surgical dressings. The reference teaches the use of powder binders to form a multiplicity of relatively small granule bonds of heat-fused material in the nonwoven. The bonds preferably are formed in the fabric by distributing heat fusible granules substantially uniformly, yet at random, in the fibrous layer, and then fusing them to cause them to flow into or through the thickness of the layer to imbed a relatively large number of fibers. The granules are fused and caused to flow by the application of heat and pressure to form strong bonds, which surround and anchor the fibers. In general, the binder members proposed have been of the same order of size as the fibers to be bonded and in the form of powder or a similar state of fine division. (Column 2, lines 25-

Art Unit: 1771

42) DRELICH further teaches that in the fabric of their invention the bonds are spaced sufficiently apart to allow the structural fibers to predominate in determining hand, drape, flexibility, absorbency, and the like. (Column 2, lines 59-63)

Since both CARROLL et al. and DRELICH are from the same field of endeavor, the purpose disclosed by DRELICH would have been recognized by CARROLL et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the composition or laminate and provide it with a powder-bonded nonwoven web with the motivation of enhancing the textile-like qualities of the fabric as disclosed by DRELICH (Column 2, lines 70-71).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over CARROLL et al. in view of DRELICH.

It is noted that the prior art of reference is silent with respect to the claimed viral barrier test. However, it is reasonable to presume that the claimed property is inherent to the invention of CARROLL et al. in view of DRELICH. Support for said presumption is found in the use of the same starting materials (i.e. non-porous film with a powder-nonwoven sheet), like processes of making the articles (i.e., extrusion coating), and the production of similar end-products (i.e., moisture vapor permeable composite sheets, etc...). The burden is upon the Applicant to prove

Art Unit: 1771

otherwise. *In re Fitzgerald*, 205 USPQ 594. In the alternative, the presently claimed function of viral barrier would obviously have been provided as a result of the inventive composite of the CARROLL et al. reference. *Note In re Best*, 195 USPQ 433.

7. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over CARROLL et al. (WO 97/45259) in view of DRELICH (US 2,880,113) as applied to claims 1 and 2 above, and further in view of ZIMMERMAN et al. (US 4,845,583).

While CARROLL et al. teaches that suitable polyolefin materials for the nonwoven web layer include polypropylene and polyethylene spunbonded webs, and DRELICH teaches powder-bonded nonwovens; the prior art of reference fails to teach that the first nonwoven layer is selected from the group consisting of poly(ethylene terephthalate), poly(1,3-propylene terephthalate) and copolymers thereof.

ZIMMERMAN et al. teaches the use of powder bonded nonwoven fabrics as liners for jackets for retaining "floppy" diskettes or disks. (Abstract) The reference teaches that by using a powder bonded nonwoven fabric, improvements in lamination around cutouts in the diskette or disk jackets or cartridges, and in cleanliness are achieved. (Column 4, lines 1-4) The reference teaches the use of polyethylene terephthalate fibers for making the nonwoven fabrics. (Column 4, lines 51-56)

Since CARROLL et al., DRELICH and ZIMMERMAN et al. are from the same field of endeavor, the purpose disclosed by ZIMMERMAN et al. would have been recognized in the pertinent art of CARROLL et al. and DRELICH.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the powder-bonded nonwoven layer and provide it with

Art Unit: 1771

polyethylene terephthalate fibers with the motivation of improving the lamination and fiber retention of the fabric as disclosed by ZIMMERMAN et al. (above).

8. Claims 20-27 and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over CARROLL et al. in view of DRELICH as stated above.

It is noted that the claimed protective cover for automobiles, the housewrap, the roof liner and the cleanroom garment include all the structural limitations taught by the prior art of reference as stated above. The claimed products are preamble limitations, and no further structural limitations are claimed. Therefore, claims 20-27 and 32-33 are rejected as stated on paragraph 4 above.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Norca L. Torres-Velazquez whose telephone number is 703-306-5714. The examiner can normally be reached on Monday-Thursday 8:30-3:00 pm and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

nlt
April 18, 2003

Ula Ruddock